CHAPTER 8

Obstacles to NSNW Arms Control

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Any effort to limit U.S. and Russian non-strategic nuclear weapons (NSNW) involves attempting to balance asymmetric equities, asymmetric concerns, and asymmetric policies. In some instances, these asymmetries will clearly impede progress toward any agreement to place constraints on NSNW systems.

Why Limit NSNW?

Will establishing an arms control regime covering NSNW make a difference to U.S. security? A strong case can be made that limiting NSNW would enhance U.S. security for the following reasons.

First, NSNW limits would increase the overall transparency of, and reciprocal knowledge about, the arsenals, nuclear programs and practices of the other party or parties to any NSNW regime. Almost certainly, major steps in nuclear weapons arms control in the future will have to be accompanied by major improvements in access to and transparency of nuclear infrastructures.

Second, parties to an agreement on NSNW would be obliged to enhance the safety and security of their arsenals. This enhancement would result from the demands of the verification provisions (e.g., consolidation of storage sites and improved accounting) and from the generally increased focus on the care and management of an NSNW stockpile subject to international agreements.

Third, an NSNW regime coupled, as is likely, with strategic force agreements, would stabilize the overall size of the nuclear arsenal and decrease the potential for circumventing any strategic arms agreement calling for seriously lower levels (for example, less than 1,500) of deployed strategic warheads.

Finally, an NSNW regime would bestow on those nations party to the agreement a valuable political benefit by demonstrating that the nuclear weapons possessor states were still pursuing arms control. That recognition, in turn, would aid in sustaining the validity and vitality of the international non-proliferation regime.

To obtain these security benefits, however, a number of obstacles — in policy, operations and arms control — will have to be overcome. They are discussed in the following sections.

Policy Obstacles

War-Fighting Strategies
On the policy level, parties to an NSNW agreement would have to consider eliminating war-fighting strategies from current war plans. For example, to the degree that NSNW continue to be viewed as usable in response to regional challenges or threats, it will be difficult to impose controls on these systems. Russian policy regarding NSNW, for example, as included in its most recent national security policy document, calls for the nation to use "all forces and equipment at its disposal, including nuclear weapons, if it has to repel armed aggression if all other means of resolving the crisis have been exhausted or proved ineffective."[1] This means, of course, that at present Moscow will be reluctant to constrain weapons that have a key role to play in ensuring homeland security.

The previous observations notwithstanding, most serious observers consider it highly unlikely that NSNW will be authorized for use by either a U.S. or Russian President in response to anything but a nuclear attack. If that is the case, then adjusting current nuclear weapons use policy to reflect that reality will ease a major obstacle to limiting NSNW.

First-Use Doctrine
Closely related to the issue of war-fighting strategies is the fact that the United States and Russia, as well as NATO, maintain a first-use policy for nuclear weapons. As with war-fighting strategies, some serious thinking needs to be done as to whether

NATO, the United States, or Russia requires a policy of nuclear first use.[2]

Maintaining such a policy increases the importance of NSNW and makes meaningful constraints on these systems more problematic. In addition, a first-use policy causes problems within the international Non-Proliferation Treaty (NPT) regime. The non-nuclear member states of the NPT, as a counterpart to their commitment not to acquire nuclear weapons, expect the major nuclear powers to respect (at least rhetorically) their 1995 negative security assurances (NSA) not to use nuclear weapons against them.[3]

National Security and Political Insecurity

For Russia, NSNW are seen as a useful means of assuaging national security and prestige concerns. They compensate for weakened conventional forces, reply to past and future NATO expansion, protect against NATO intervention in critical regions, and are a response to threats to the homeland from Central Asian or Middle Eastern rogue states and terrorists. As some Russian experts note, "Russia considers [NSNW] as an important political instrument to answer the U.S. and NATO's efforts to attain military superiority. In particular [NSNW] is considered as an equalizer for NATO's superiority in conventional weapons."[4]

NSNW is also seen as a hedge against future developments in China, the majority of whose forces are short and intermediate-range and would have to be taken into account by Moscow in agreeing to any NSNW limits. Ultimately, NSNW are also seen as a potential counter to U.S. national missile defense (NMD) deployment.[5]

For Europeans, NSNW are seen as a response to political and security uncertainties, coupling the defense of Europe to the overall U.S. deterrent. The fear of many Europeans is that without this nuclear "link" — and their demonstrable willingness to preserve it — the United States will abandon the Europeans to their own fecklessness. On the other hand, the Europeans do not seem eager to insist on a continued American nuclear presence

on the continent if the United States is itself prepared to remove the weapons. This would be particularly true if the United States made it clear that in a major crisis it would be prepared to return NSNW to the continent.

Operational Obstacles

Verification
NSNW arms control present two major verification problems. First, NSNW are small and there are unlikely to be any meaningful limits on the systems capable of delivering NSNW weapons, such as artillery tubes and aircraft.

Second, in contradistinction to the strategic arsenal, where there are only so many spaces for missile warheads on a one-shot ICBM missile, dual-capable delivery systems will be essentially unlimited: virtually the entire NSNW arsenal can always be delivered. This means that in order to establish verifiable limits on NSNW, warheads — not delivery systems — will have to be the basic unit of account. As a result, parties to an NSNW treaty will at some point need to establish a NSNW warhead verification regime, probably quite intrusive and including on-site inspection, tagging, production/dismantlement monitoring, and so forth.

The scope and intensity of an NSNW verification regime will make its negotiation difficult. But if the United States and Russia are going to move ahead in arms control, comprehensive and intrusive verification will be the vanguard. As force levels decrease, concern about non-compliant behavior increases (because the significance of successful cheating is greater when arsenals are smaller). Additionally, parties to an NSNW agreement will require and seek greater confidence in their understanding about what is happening throughout the nuclear infrastructure of other players.

In short, greater transparency is not only desirable for NSNW but necessary if the United States and Russia are ever to agree to truly low overall levels of nuclear weapons.

Command and Control
Command and control is not so much an obstacle to NSNW arms control as it is a mutual concern of the nuclear possessor states. There are, for example, worrisome questions about old or non-existent permissive action links, pre-delegated launch authority, security practices at storage sites and during transport, and the possibility of theft or accounting mismanagement of man-portable systems.[6]

A thorough verification and transparency regime could help ameliorate some of the potential command and control problems. For example, a low level of permitted NSNW systems would most likely force older systems out of the arsenal. Additionally, in order to participate in an extensive on-site inspection regime it almost certainly would be necessary to strengthen and modernize accounting, storage and transportation practices.

Dual-Purpose Delivery Systems
Strategic nuclear delivery systems (ICBMs and SLBMs) are generally devoted solely to strategic forces. Conventionally-armed artillery tubes, aircraft and cruise missile air-frames, on the other hand, are all inherently NSNW-capable. This dual-capability does not mean that NSNW cannot be effectively limited but it does suggest that limiting delivery systems (which was the original approach to dealing with strategic weapons in SALT I and II) will not be the best approach to controlling NSNW.

Diversity of Weapon Types
NSNW vary widely in nature from atomic demolition munitions (ADMs) to artillery shells, torpedoes and SLCMs . This complicates devising a comprehensive NSNW arms control agreement but is not an insurmountable obstacle to limiting these weapons. It does suggest, however that NSNW weapons could be, and probably should be, disaggregated for purposes of arms control. This means that some types of NSNW might be banned (those most easily misappropriated like ADMS or artillery shells), some might be permitted under separate limits (such as SLCMs), and others (perhaps air-launched weapons, e.g. gravity bombs and ALCMs) might be subject to a numerical limit.

Another possible approach to limiting NSNW might be by basing mode. Air-delivered could be the only basing mode permitted; alternatively, it could be the only basing mode banned.[7] In any case, if the United States and Russia are serious about instituting NSNW limits, the weapons will probably have to be disaggregated and weapons limited by systems/type/basing mode, rather than under one "equal aggregate" limit.

Diversity of Ranges

NSNW ranges vary from backpack (or "suitcase") ADMs delivered to the target in person, to cruise missiles with the capability to destroy targets thousands of kilometers away. This diversity of ranges could complicate NSNW arms control if the weapons were to be constrained by delivery system. Range diversity would not have the same impact, however, if NSNW were limited by warhead number.

One sensitive aspect of the range issue is the definition of "non-strategic." After all, one country's "non-strategic" nuclear weapons may well be another nation's strategic ones. As Russian commentators point out, "…during deep reductions of nuclear weapons the role of both long-range SLCMs and [NSNW] capable of reaching the territory of the other country grows significantly."[8] Again, it might be possible to avoid irresolvable philosophic discussions over strategic/non-strategic weapons if limits are based on warheads rather than on ranges or type of delivery system.

Diversity of Possessor States

In addition to the United States and Russia, NSNW possessor states (or entities) include China, France, India, Israel, Pakistan and NATO.[9] Additionally, if potential proliferators such as Iraq, Iran or North Korea appear on the international scene, they are likely to develop or have access to weapons that the United States, at least, would consider NSNW.

Because "unfriendly" NSNW-possessor states are so numerous, Russia, for certain, will consider the impact of any negotiated NSNW arms control agreement in terms of its overall national

security environment. If major U.S.-Russian reductions (as opposed to high ceilings) were to be agreed, for example, Moscow would factor in the NSNW forces of NATO in arriving at an acceptable level. As NATO expands eastward, more of Russia becomes vulnerable to NSNW if deployed in the new member states. Similarly, as NATO expands, Russia's ability to hold NATO hostage with NSNW becomes more important – if not critical – to Russia's perception of its own security.

Russia could well seek from the outset to include China – whose NSNW could strike Russian territory — in any negotiations, but it is unlikely that Peking will be interested in entering the arms control arena through the NSNW door.[10] In general, because of the wide variation in stockpile size and differing perceptions of vulnerability to NSNW, it is not likely third countries will seek to become involved in any NSNW negotiations (at least in the early stages).

The United States, on the other hand, faces no real threat to its homeland from foreign-based NSNW (although U.S. allies and expeditionary forces could be subject to NSNW threats).[11] However, short-range attacks by non-state actors using non-strategic nuclear weapons remain a potential, if perhaps unlikely, threat.

Smaller Arsenals Could Lead to Increased Reliance on NSNW
As the overall size of strategic nuclear forces decreases, the relevance of and reliance on NSNW could increase, particularly for Russia. If strategic forces are reduced to 1,500 or less, for example, the perception of the importance NSNW provides deterrence could be enhanced. Additionally, if the United States is perceived as attempting to neutralize Russian strategic forces with national missile defenses, Moscow's ability to hold U.S. expeditionary forces and NATO allies hostage with NSNW becomes a more attractive — if not the only — alternative to bolster confidence in its ability to deter the United States.

This same shift to increased reliance on NSNW might result, again in the Russian case, as conventional forces decrease in size or are perceived to be under-resourced, weak and demoralized.

Another development that might enhance the value of NSNW in Russian eyes would be the need to counter hard target capable U.S. precision-guided munitions (PGMs).

Sophistication of Conventional Capabilities:
The United States and Russia have different options for responding to non-nuclear challenges, including, in the case of the United States, precision-guided conventional munitions, real-time battlefield intelligence, significant force projection capabilities, and a degree of acceptance by the international community for interventionary activities. None of these assets is enjoyed by the Russians.

Russia seems particularly sensitive to the PGM issue. On the one hand, Russian commentators point out that "the inferiority of Russia in modern PGMs is…four-to-one compared to the United States alone and six-to-one compared to NATO as a whole."[12] On the other hand, they maintain that "If the potential adversary acquires PGMs capable of an effective disarming strike, such a step becomes quite attractive because a PGM strike does not cause those negative consequences that a nuclear strike does. In this sense, improvements in the accuracy and effectiveness of conventional weapons are destabilizing factors."[13]

These experts "believe the only possible way to solve this problem is the linkage of the reduction of strategic and tactical nuclear arms with the revision of the CFE Treaty [which calls for limits on conventional systems]. For example,…Russia has to seek limitations on deployment of tactical and auxiliary aviation… (tactical bombers, AWACs, reconnaissance drones)… We believe that PGM is a much bigger threat to Russia's strategic arsenal than U.S. NMD."[14]

Arms Control Obstacles

Discrepancy/Uncertainty in Numbers of NSNW
Some analysts believe there may be much as a 14 to 1 discrepancy in Russia's favor in numbers of NSNW. Under START II, the U.S. operational stockpile of 5,000 strategic nuclear weapons will include approximately 1,000 non-strategic

nuclear weapons, and the hedge stockpile of 2,500 warheads will include some B61 and W80 warheads, which are normally considered NSNW. The inactive reserve of some 2,500 warheads will also include 400 NSNW warheads.[15]

According to open sources, in 1998 Russia had about 4,000 NSNW in service with12,000 in reserve or awaiting elimination.[16] Alexei Arbatov in 1999 estimated that Russia had 21,700 NSNW in 1991, would eliminate about 13,700 by the end of the decade, and the remaining 4,000 would be obsolete (at the end of their design lives) by 2003.[17]

A critical problem in pursuing NSNW arms control will be to establish a baseline from which to design an acceptable set of reductions, limitations and/or ceilings. This could be difficult and contentious, as the national security establishments in both the United States and Russia have demonstrated varying degrees of resistance to the highly intrusive forays into the nuclear infrastructure required for such transparency.

Change of Emphasis in Verification
Strategic nuclear force verification, as in the SALT and START treaties, involves, for the most part, delivery systems with attributed warheads on operational forces. This approach was possible because of the unique nature of most strategic nuclear delivery systems.

NSNW verification, on the other hand, would likely require cradle-to-grave tracking—production/storage/elimination—of actual warheads in the stockpile rather than attributed ones on delivery systems. This introduces a new level of intrusiveness required to deal with lower levels of smaller, dual-capable NSNW systems as well as lower levels of strategic weapons.

Aggregate or Disaggregate NSNW
One key question involving NSNW arms control is whether to limit non-strategic weapons as a group or to establish constraints on separate categories of NSNW. For example, if strategic forces are reduced to approximately 1,500 and all other NSNW

are constrained, should there continue to be separate, rather loose limits on SLCMs in the strategic nuclear forces agreements?

Another potential "aggregate/disaggregate" question involves nuclear air defense and ballistic missile defense (BMD) warheads which are still in the active Russian arsenal. There has been discussion at times of a combined offensive/defensive warhead limit for strategic forces.[18] Should this approach be applied to NSNW weapons, and should air defense or BMD warheads count against NSNW limits?[19]

Aggregate or Disaggregate NSNW and Strategic Weapons
While aggregating NSNW and strategic warheads into a single overall nuclear arsenal limit has theoretical appeal, it is not likely to be a practical or acceptable real-world approach. Because of the existing asymmetries in force composition, an aggregate limit of NSNW and strategic warheads would probably result in unacceptable force tradeoffs for one party or another.

If, for example, the aggregate NSNW and strategic total were too low—say 2,000 nuclear weapons—Moscow would be at a considerable disadvantage with fewer NSNW weapons *vis-à-vis* its other potential strategic adversaries. If, on the other hand, the aggregate NSNW/strategic total were kept high to accommodate a larger number of Russian NSNW forces, this would prove an unattractive and costly option for the United States and would be perceived as a decision calculated to avoid a reduction in the size of nuclear forces.

Relevance of NSNW Limits to Third Countries
If aggregated, the combined level of NSNW and strategic warheads would be much too high to expect the involvement of third countries in any potential arms control agreement. If strategic and non-strategic weapons were disaggregated and the NSNW level set low, then states which possess mainly NSNW forces would perceive residual U.S. or Russian strategic weapons as even more threatening.

As a result, it is unlikely that third countries will choose to participate in NSNW discussions. In the U.S. case, the absence

of third countries should not present a problem. The Russians, on the other hand, may well believe they need to take Chinese nuclear forces into account, particularly as those forces are expected to expand and improve significantly in the next decade.

Are There Opportunities?

While the policy, operational, and arms control obstacles to limits on NSNW are clearly significant, they are by no means insurmountable. Moreover, the national and international security benefits would be considerable. It remains to be seen, however, whether a coincidence of political will and negotiating opportunity will be available in the next few years to deal with these issues.

Endnotes

[1] Russian National Security Concept, adopted January 10, 2000.
[2] See "NATO's Nuclear Weapons: The Rationale for 'No First Use'" by Jack Mendelsohn, *Arms Control Today*, July/August 1999 and "NATO's Nuclear Weapons Policy and the No-First-Use Option," Thomas Graham, Jr. and Jack Mendelsohn, *The International Spectator*, October-December 1999.
[3] Under the Negative Security Assurances, the five declared nuclear powers commit not to use or threaten to use nuclear weapons against non-nuclear weapons states which are members in good standing of the NPT. Since only one non-nuclear nation does not belong to the NPT (Cuba), the NSA's are in effect a commitment not to use nuclear weapons against 180+ states.
[4] "NATO Expansion and the Nuclear Reduction Process," Anatoli Diakov, Timur Kadyshev, Eugene Miasnikov and Pavel Podvig, Center for Arms Control, Energy and Environmental Studies at MIPT, April 1999.
[5] It is worth considering the possibility that U.S. NMD deployments could drive Russians to renounce meaningful qualitative constraints on most nuclear forces. INF and the 1991 unilateral initiatives are most relevant in this context, but so is the renunciation of the ban on MIRVs on land-based missiles (in START II) and the abandonment of some useful transparency measures. These decisions in the strategic arena

would make it more difficult to place meaningful constraints on NSNW.

[6] This issue was dramatized by General Lebed's claim in 1997 that a number of "suitcase-sized" nuclear weapons had gone astray in Russia.

[7] See for example, Stephen P. Lambert and David A. Miller, "Russia's Crumbling Tactical Nuclear Weapons Complex: An Opportunity for Arms Control," INSS Occasional Paper 12, USAF Institute for National Security Studies, April 1997.

[8] Diakov, et. al.

[9] The UK has retired and dismantled all its NSNW.

[10] The overwhelming majority of China's land- and air-based nuclear weapons (ca. 400 out of 450) have ranges under 5500 km.

[11] NSNW in the hands of non-state actors presents another problem that cannot be dealt with through traditional arms control agreements.

[12] Nikolai Sokov, "Tactical Nuclear Weapons Elimination: Next Step for Arms Control," *The Nonproliferation Review*, Winter 1997.

[13] Diakov, et. al.

[14] *Ibid.*

[15] "NRDC Nuclear Notebook," *The Bulletin of the Atomic Scientists,* July/August 1996.

[16] See Harald Müller and Annette Schaper, PRIF, "Types, carriers and locations of tactical nuclear weapons." Draft dated April 20, 2000.

[17] In *The Nuclear Turning Point*, Harold A. Feiveson editor, Brookings Institution Press, 1999, pp. 305-324.

[18]See, for example, Sergei Rogov's statement on this subject in "The Last Arms Control Package," delivered at the Carnegie Endowment in December 2000: "A common ceiling for offensive missiles and ABM interceptor missiles could be established with no more than 600 launchers."

[19]This approach would only work if BMD systems were of the traditional land- or sea-based launcher/interceptor type. It is unlikely a formula could be found that would aggregate directed energy weapons with nuclear warheads.